

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Original) A method for producing a bonded wafer, comprising:
  - an epitaxial growth step for growing an epitaxial layer containing boron in a wafer for active layer;
  - an insulating film formation step for forming an insulating film in a surface of said epitaxial layer;
  - an ion implantation step, following said insulating film formation, for ion-implanting of a light element into said epitaxial layer at a predetermined depth to thereby form an ion-implanted area therein;
  - a bonding step, following said ion implantation, for bonding said active layer wafer and a supporting wafer together with said insulating film interposed therebetween to thereby form a bonded wafer; and
  - a cleavage and separation step for heat treating said bonded wafer to cause bubbles of light element to be generated in said ion-implanted area and thereby a part of said active layer wafer to be cleaved and separated at the site of said predetermined depth for forming an active layer.

2. (Original) A method for producing a bonded wafer in accordance with claim 1, in which a concentration of boron contained in said epitaxial layer is  $5 \times 10^{18}$  atoms/cm<sup>3</sup> or higher.

3. (Currently Amended) A method for producing a bonded wafer in accordance with claim 1-~~or 2~~, in which a thickness of said epitaxial layer is 0.3μm or thicker.

4. (Currently Amended) A method for producing a bonded wafer in accordance with ~~any one of claim 1 to 3~~, in which said ion-implanted area is formed in said epitaxial layer.

5. (Currently Amended) A method for producing a bonded wafer in accordance with ~~any one of claim 1 to 4~~, in which a thickness of said insulating film is thinner than 0.2μm.

6. (Original) A method for producing a bonded wafer, comprising:  
an ion-implantation step for ion-implanting of a light element into a wafer for active layer at a predetermined depth to thereby form an ion-implanted area therein, said active layer wafer comprising an insulating film formed thereon and containing boron at a concentration of  $9 \times 10^{18}$  atoms/cm<sup>3</sup> or higher and oxygen at a concentration below  $12 \times 10^{17}$  atmos/cm<sup>3</sup> (old ASTM);

a bonding step for subsequently bonding said active layer wafer that has been subjected to the ion implantation and a supporting wafer

together with said insulating film interposed therebetween to thereby form a bonded wafer; and

a cleavage and separation step for heat treating said bonded wafer to cause bubbles of light element to be generated in said ion-implanted area and thereby a part of said active layer wafer to be cleaved and separated at the site of said predetermined depth for forming an active layer.

7. (Currently Amended) A method for producing a bonded wafer in accordance with ~~any one of claim 1 to 6~~, in which an annealing process is applied to said active layer wafer or said bonded wafer at 1000°C or a higher temperature for one hour or more in a reducing gas atmosphere containing hydrogen gas after said formation of said insulating film in said active layer wafer or said cleavage and separation of said active layer wafer.

8. (New) A method for producing a bonded wafer in accordance with claim 2, in which a thickness of said epitaxial layer is 0.3μm or thicker.

9. (New) A method for producing a bonded wafer in accordance with claim 2, in which said ion-implanted area is formed in said epitaxial layer.

10. (New) A method for producing a bonded wafer in accordance with claim 3, in which said ion-implanted area is formed in said epitaxial layer.

11. (New) A method for producing a bonded wafer in accordance with claim 2, in which a thickness of said insulating film is thinner than 0.2μm.

12. (New) A method for producing a bonded wafer in accordance with claim 3, in which a thickness of said insulating film is thinner than 0.2 $\mu$ m.

13. (New) A method for producing a bonded wafer in accordance with claim 4, in which a thickness of said insulating film is thinner than 0.2 $\mu$ m.

14. (New) A method for producing a bonded wafer in accordance with claim 2, in which an annealing process is applied to said active layer wafer or said bonded wafer at 1000°C or a higher temperature for one hour or more in a reducing gas atmosphere containing hydrogen gas after said formation of said insulating film in said active layer wafer or said cleavage and separation of said active layer wafer.

15. (New) A method for producing a bonded wafer in accordance with claim 3, in which an annealing process is applied to said active layer wafer or said bonded wafer at 1000°C or a higher temperature for one hour or more in a reducing gas atmosphere containing hydrogen gas after said formation of said insulating film in said active layer wafer or said cleavage and separation of said active layer wafer.

16. (New) A method for producing a bonded wafer in accordance with claim 4, in which an annealing process is applied to said active layer wafer or said bonded wafer at 1000°C or a higher temperature for one hour or more in a reducing gas atmosphere containing hydrogen gas after said formation of said insulating film in said active layer wafer or said cleavage and separation of said active layer wafer.

17. (New) A method for producing a bonded wafer in accordance with claim 5, in which an annealing process is applied to said active layer wafer or said bonded wafer at 1000°C or a higher temperature for one hour or more in a reducing gas atmosphere containing hydrogen gas after said formation of said insulating film in said active layer wafer or said cleavage and separation of said active layer wafer.

18. (New) A method for producing a bonded wafer in accordance with claim 6, in which an annealing process is applied to said active layer wafer or said bonded wafer at 1000°C or a higher temperature for one hour or more in a reducing gas atmosphere containing hydrogen gas after said formation of said insulating film in said active layer wafer or said cleavage and separation of said active layer wafer.